

**Efek Antiangiogenik Ekstrak Metanolik Biji Nangka  
(*Artocarpus heterophyllus* Lamk.) pada Kultur Ex Ovo  
Membran Korio Alantois Embrio Ayam**

**Antiangiogenic Effect of Jackfruit (*Artocarpus heterophyllus* Lamk.)  
Seed Methanolic Extract in Ex Ovo Chicken Chorioallantoic Membrane**

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**Abstract:** Angiogenesis is the formation of blood vessels from preexisting vessels and it related to cancer growth. Cancer growth required new support for nutrients and oxygen, which is provided by new vessel resulted from angiogenesis. The release of tumor angiogenic factor (TAF), such as basic fibroblast growth factor (bFGF), is the key factor for new vessel formation and further cancer development. The compounds that are able to inhibit angiogenesis is a potential therapeutic agent for cancer treatment. Some of well known antiangiogenic compounds are flavonoids, saponins, and tannins. It is already known that seed extract of jackfruit (*Artocarpus heterophyllus*) contain some amount of that compounds. This study used ex ovo culture of chicken chorioallantoic membrane (CAM), which has advantage compare to other method in term of easy visualization of blood vessel formation. The aim of this study was to examine the effects of jackfruit seed methanolic extract effective concentration on angiogenesis inhibition. The research methods were jackfruit seeds methanolic extraction, ex ovo culture, antiangiogenic assay, and macroscopic observation on CAM blood vessel formation. The results showed that jackfruit seeds could inhibit bFGF-induced angiogenesis in ex ovo CAM at concentration of 35 µg/mL with inhibition of 61,14±15,73% through macroscopic observation.

**Keywords:** Antiangiogenic, *Artocarpus heterophyllus*, CAM, ex ovo culture